



SEQUENCE LISTING

<110> Ono Pharmaceutical Co., LTD

<120> NOVEL PLASMID DNA COMPRISING REPORTER GENE DNA AND USE OF THE SAME

<130> Q57282

<140> 09/446,634

<141> 1999-12-23

<150> JP 9-171440

<151> 1997-06-27

<160> 24

<170> PatentIn version 3.2

<210> 1

<211> 37

<212> DNA

<213> Artificial sequence

<220>

<223> Primer F1

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<223> Primer R1

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<223> Primer F2

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 at 62

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 gaattcgatc acggtaccga tatcgagctc gcggccgc 38

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<213> Artificial sequence

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<223> Influenza hemagglutinin epitope

<400> 20

Tyr Pro Tyr Asp Val Pro Asp Tyr Ala
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<210> 21

<211> 38

<212> DNA

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<220>

<223> Multicloning site DNA linker- antisense strand

<400> 21

gcggccgcga gctcgatc ggtaccgtcg acgaattc

38

<210> 22

<211> 335

<212> PRT

<213> Homo sapiens

<400> 22

Met Leu Gly Ile Trp Thr Leu Leu Pro Leu Val Leu Thr Ser Val Ala
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Arg Leu Ser Ser Lys Ser Val Asn Ala Gln Val Thr Asp Ile Asn Ser
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Lys Gly Leu Glu Leu Arg Lys Thr Val Thr Thr Val Glu Thr Gln Asn
20 25 30

Leu Glu Gly Leu His His Asp Gly Gln Phe Cys His Lys Pro Cys Pro
35 40 45

Pro Gly Glu Arg Lys Ala Arg Asp Cys Thr Val Asn Gly Asp Glu Pro
50 55 60

Asp Cys Val Pro Cys Gln Glu Gly Lys Glu Tyr Thr Asp Lys Ala His
65 70 75 80

Phe Ser Ser Lys Cys Arg Arg Cys Arg Leu Cys Asp Glu Gly His Gly
85 90 95

Leu Glu Val Glu Ile Asn Cys Thr Arg Thr Gln Asn Thr Lys Cys Arg
100 105 110

Cys Lys Pro Asn Phe Phe Cys Asn Ser Thr Val Cys Glu His Cys Asp
115 120 125

Pro Cys Thr Lys Cys Glu His Gly Ile Ile Lys Glu Cys Thr Leu Thr
130 135 140

Ser Asn Thr Lys Cys Lys Glu Glu Gly Ser Arg Ser Asn Leu Gly Trp
145 150 155 160

Leu Cys Leu Leu Leu Leu Pro Ile Pro Leu Ile Val Trp Val Lys Arg
165 170 175

Lys Glu Val Gln Lys Thr Cys Arg Lys His Arg Lys Glu Asn Gln Gly
180 185 190

Ser His Glu Ser Pro Thr Leu Asn Pro Glu Thr Val Ala Ile Asn Leu
195 200 205

Ser Asp Val Asp Leu Ser Lys Tyr Ile Thr Thr Ile Ala Gly Val Met
210 215 220

Thr Leu Ser Gln Val Lys Gly Phe Val Arg Lys Asn Gly Val Asn Glu
225 230 235 240

Ala Lys Ile Asp Glu Ile Lys Asn Asp Asn Val Gln Asp Thr Ala Glu
245 250 255

Gln Lys Val Gln Leu Leu Arg Asn Trp His Gln Leu His Gly Lys Lys
260 265 270

Glu Ala Tyr Asp Thr Leu Ile Lys Asp Leu Lys Lys Ala Asn Leu Cys
275 280 285

Thr Leu Ala Glu Lys Ile Gln Thr Ile Ile Leu Lys Asp Ile Thr Ser
290 295 300

Asp Ser Glu Asn Ser Asn Phe Arg Asn Glu Ile Gln Ser Leu Val
305 310 315

<210> 23
<211> 327
<212> PRT
<213> Mus musculus

<400> 23

Met Leu Trp Ile Trp Ala Val Leu Pro Leu Val Leu Ala Gly Ser Gln
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-5 -1 1 5 10

Leu Arg Arg Arg Val His Glu Thr Asp Lys Asn Cys Ser Glu Gly Leu
 15 20 25
 Tyr Gln Gly Gly Pro Phe Cys Cys Gln Pro Cys Gln Pro Gly Lys Lys
 30 35 40
 Lys Val Glu Asp Cys Lys Met Asn Gly Gly Thr Pro Thr Cys Ala Pro
 45 50 55
 Cys Thr Glu Gly Lys Glu Tyr Met Asp Lys Asn His Tyr Ala Asp Lys
 60 65 70 75
 Cys Arg Arg Cys Thr Leu Cys Asp Glu Glu His Gly Leu Glu Val Glu
 80 85 90
 Thr Asn Cys Thr Leu Thr Gln Asn Thr Lys Cys Lys Cys Lys Pro Asp
 95 100 105
 Phe Tyr Cys Asp Ser Pro Gly Cys Glu His Cys Val Arg Cys Ala Ser
 110 115 120
 Cys Glu His Gly Thr Leu Glu Pro Cys Thr Ala Thr Ser Asn Thr Asn
 125 130 135
 Cys Arg Lys Gln Ser Pro Arg Asn Arg Leu Trp Leu Leu Thr Ile Leu
 140 145 150 155
 Val Leu Leu Ile Pro Leu Val Phe Ile Tyr Arg Lys Tyr Arg Lys Arg
 160 165 170
 Lys Cys Trp Lys Arg Arg Gln Asp Asp Pro Glu Ser Arg Thr Ser Ser
 175 180 185
 Arg Glu Thr Ile Pro Met Asn Ala Ser Asn Leu Ser Leu Ser Lys Tyr
 190 195 200
 Ile Pro Arg Ile Ala Glu Asp Met Thr Ile Gln Glu Ala Lys Lys Phe
 205 210 215
 Ala Arg Glu Asn Asn Ile Lys Glu Gly Lys Ile Asp Glu Ile Met His
 220 225 230 235
 Asp Ser Ile Gln Asp Thr Ala Glu Gln Lys Val Gln Leu Leu Leu Cys
 240 245 250
 Trp Tyr Gln Ser His Gly Lys Ser Asp Ala Tyr Gln Asp Leu Ile Lys
 255 260 265

Gly Leu Lys Lys Ala Glu Cys Arg Arg Thr Leu Asp Lys Phe Gln Asp
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Met Val Gln Lys Asp Leu Gly Lys Ser Thr Pro Asp Thr Gly Asn Glu
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Asn Glu Gly Gln Cys Leu Glu
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<210> 24

<211> 9

<212> PRT

<213> Artificial sequence

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<223> T antigen-originated nuclear transport signal

<400> 24

Ala Pro Lys Lys Lys Arg Lys Val Gly
1 5

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 <120> NOVEL PLASMID DNA COMPRISING REPORTER GENE DNA AND USE OF THE SAME
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 <150> JP 9-171440
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 at 62

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 tagatctcc 69

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<223> Influenza hemagglutinin epitope

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<210> 22

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<212> PRT

<213> Homo sapiens

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Arg Leu Ser Ser Lys Ser Val Asn Ala Gln Val Thr Asp Ile Asn Ser
1 5 10 15

Lys Gly Leu Glu Leu Arg Lys Thr Val Thr Thr Val Glu Thr Gln Asn
20 25 30

Leu Glu Gly Leu His His Asp Gly Gln Phe Cys His Lys Pro Cys Pro
35 40 45

Pro Gly Glu Arg Lys Ala Arg Asp Cys Thr Val Asn Gly Asp Glu Pro
50 55 60

Asp Cys Val Pro Cys Gln Glu Gly Lys Glu Tyr Thr Asp Lys Ala His
65 70 75 80

Phe Ser Ser Lys Cys Arg Arg Cys Arg Leu Cys Asp Glu Gly His Gly
85 90 95

Leu Glu Val Glu Ile Asn Cys Thr Arg Thr Gln Asn Thr Lys Cys Arg
100 105 110

Cys Lys Pro Asn Phe Phe Cys Asn Ser Thr Val Cys Glu His Cys Asp
115 120 125

Pro Cys Thr Lys Cys Glu His Gly Ile Ile Lys Glu Cys Thr Leu Thr
130 135 140

Ser Asn Thr Lys Cys Lys Glu Glu Gly Ser Arg Ser Asn Leu Gly Trp
145 150 155 160

Leu Cys Leu Leu Leu Leu Pro Ile Pro Leu Ile Val Trp Val Lys Arg
165 170 175

Lys Glu Val Gln Lys Thr Cys Arg Lys His Arg Lys Glu Asn Gln Gly
180 185 190

Ser His Glu Ser Pro Thr Leu Asn Pro Glu Thr Val Ala Ile Asn Leu
195 200 205

Ser Asp Val Asp Leu Ser Lys Tyr Ile Thr Thr Ile Ala Gly Val Met
210 215 220

Thr Leu Ser Gln Val Lys Gly Phe Val Arg Lys Asn Gly Val Asn Glu
225 230 235 240

Ala Lys Ile Asp Glu Ile Lys Asn Asp Asn Val Gln Asp Thr Ala Glu
245 250 255

Gln Lys Val Gln Leu Leu Arg Asn Trp His Gln Leu His Gly Lys Lys
260 265 270

Glu Ala Tyr Asp Thr Leu Ile Lys Asp Leu Lys Lys Ala Asn Leu Cys
275 280 285

Thr Leu Ala Glu Lys Ile Gln Thr Ile Ile Leu Lys Asp Ile Thr Ser
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Asp Ser Glu Asn Ser Asn Phe Arg Asn Glu Ile Gln Ser Leu Val
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<211> 327
<212> PRT
<213> Mus musculus

<400> 23

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Leu Arg Val His Thr Gln Gly Thr Asn Ser Ile Ser Glu Ser Leu Lys
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Leu Arg Arg Arg Val His Glu Thr Asp Lys Asn Cys Ser Glu Gly Leu
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 Tyr Gln Gly Gly Pro Phe Cys Cys Gln Pro Cys Gln Pro Gly Lys Lys
 30 35 40
 Lys Val Glu Asp Cys Lys Met Asn Gly Gly Thr Pro Thr Cys Ala Pro
 45 50 55
 Cys Thr Glu Gly Lys Glu Tyr Met Asp Lys Asn His Tyr Ala Asp Lys
 60 65 70 75
 Cys Arg Arg Cys Thr Leu Cys Asp Glu Glu His Gly Leu Glu Val Glu
 80 85 90
 Thr Asn Cys Thr Leu Thr Gln Asn Thr Lys Cys Lys Cys Lys Pro Asp
 95 100 105
 Phe Tyr Cys Asp Ser Pro Gly Cys Glu His Cys Val Arg Cys Ala Ser
 110 115 120
 Cys Glu His Gly Thr Leu Glu Pro Cys Thr Ala Thr Ser Asn Thr Asn
 125 130 135
 Cys Arg Lys Gln Ser Pro Arg Asn Arg Leu Trp Leu Leu Thr Ile Leu
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 Val Leu Leu Ile Pro Leu Val Phe Ile Tyr Arg Lys Tyr Arg Lys Arg
 160 165 170
 Lys Cys Trp Lys Arg Arg Gln Asp Asp Pro Glu Ser Arg Thr Ser Ser
 175 180 185
 Arg Glu Thr Ile Pro Met Asn Ala Ser Asn Leu Ser Leu Ser Lys Tyr
 190 195 200
 Ile Pro Arg Ile Ala Glu Asp Met Thr Ile Gln Glu Ala Lys Lys Phe
 205 210 215
 Ala Arg Glu Asn Asn Ile Lys Glu Gly Lys Ile Asp Glu Ile Met His
 220 225 230 235
 Asp Ser Ile Gln Asp Thr Ala Glu Gln Lys Val Gln Leu Leu Leu Cys
 240 245 250
 Trp Tyr Gln Ser His Gly Lys Ser Asp Ala Tyr Gln Asp Leu Ile Lys
 255 260 265

Gly Leu Lys Lys Ala Glu Cys Arg Arg Thr Leu Asp Lys Phe Gln Asp
270 275 280

Met Val Gln Lys Asp Leu Gly Lys Ser Thr Pro Asp Thr Gly Asn Glu
285 290 295

Asn Glu Gly Gln Cys Leu Glu
300 305

<210> 24

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<212> PRT

<213> Artificial sequence

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<223> T antigen-originated nuclear transport signal

<400> 24

Ala Pro Lys Lys Lys Arg Lys Val Gly
1 5